

Chapter 16: Fire, Knife & Axe

Lily: "Tools are for helping, and a grown-up is always near!"

Older Rangers can learn to use real tools and build a real fire, **always with a trained grown-up close by**. Tools are for making and helping, never for play, never for scaring anyone, and never inside a tent or shelter.

For Sprouts and Trail Cubs (all ages): fire safety only

- Stay back from every fire: at least two big steps, or further if a grown-up says.
- Never touch matches, lighters or fire-starters. Bring them to a grown-up.
- Clothes on fire? **Stop, drop and roll**, with your hands over your face.
- Fire in the shelter? Get out, stay out, crawl low (Chapter 5).

Pathfinders (11–13): knives and campfires with a grown-up

Knife safety

1. **Ask first.** Only use a knife when a grown-up says yes and is nearby.
2. **Safety circle:** before you open the blade, hold your arm out straight with the closed knife and turn all the way round. No one, and nothing you don't want to cut, should be inside that circle. Then keep it clear.
3. **Sit down** to whittle or cut, with your elbows on your knees, so the blade stays out in front of you, away from your legs.
4. **Cut away from yourself**, never toward your hand, legs or body. Keep your other hand behind the blade.
5. **Use small, controlled strokes.** If you have to push hard, the knife is too blunt or the cut is too big.
6. **Close and pass:** close a folding knife (or sheathe a fixed knife) before you stand, walk or pass it. To pass an open knife, hold the back of

the blade, handle toward the other person; let go only when they say "thank you".

7. **Never throw a knife, never run with one, and never carry it open.**
8. **Care:** keep it clean and dry, wipe it after use, and keep it closed and put away. A sharp knife is safer than a blunt one, because it doesn't slip. A grown-up shows you how to sharpen it.
9. **Cuts:** press, rinse, cover, tell (Chapter 13).

Building a fire (a grown-up present the whole time)

1. **Check the rules.** Is fire allowed here today?
Many places have **fire bans**, especially in dry, windy weather. If in doubt, no fire. Use a camp stove or skip it.
2. **Pick the site:** - an existing fire ring, or bare soil
- far from tents, shelters, trees, roots,
overhanging branches and dry grass - **never inside a tent or shelter** - water and a shovel ready before you start
3. **Gather three piles before you strike anything:** - **tinder:** dry grass, bark shavings, cotton - **kindling:** sticks from pencil to thumb

thickness - **fuel:** wrist-thick dead, fallen wood; never cut living trees

4. **Teepee lay:** put a tinder bundle in the middle, then lean kindling around it like a tent, leaving a doorway on the side the wind comes from.
5. **Log-cabin lay:** place a tinder bundle with a small teepee of kindling over it, then stack sticks in a square around it, two by two, getting smaller as you go up.
6. **Lighting:** - **Matches:** kneel, strike away from you, shelter the flame with your hand, and light the tinder from the windward side, low down. Drop used matches into the fire. - **Ferro rod:** hold the rod tip right in the tinder, and pull the rod back while the striker stays still, so sparks land without scattering the tinder.
7. **Grow it slowly:** add kindling, then fuel. Keep it small.
8. **Never leave it.** Someone stays with the fire the whole time. Long hair tied back, loose sleeves rolled up.
9. **Put it out cold:** drown it with water, stir the ashes, then drown again until there's no hiss

and no steam. Feel near it with the back of your hand. If it's warm, it isn't out.

10. **Leave no trace:** burn wood to ash, scatter cold ash where allowed, and leave the site cleaner than you found it.

Trailblazers (14–17): axes, saws, harder fires and teaching others

Axe and saw safety

1. **Training first:** learn axes and saws from a trained grown-up, hands-on, before using them alone.
2. **Safety circle and clear zone:** check a full arm-plus-axe circle around you, and look up and down too (no branches or ropes overhead). Keep onlookers well back. Clear twigs and vines that could catch the swing.
3. **Chopping block:** split on a steady, flat-topped log on firm ground. Never chop wood lying directly on the ground, where the axe can bounce or hit stones.
4. **Kneeling vs standing:** - **Hatchet:** kneel on one knee with the other leg moved out of the line of the swing, so a missed stroke goes into the block or the ground, not your leg. - **Full-size axe:** stand with feet apart, and the block a little in front of you. Let the axe weight do the work, and keep your swing in a straight line.

5. **Splitting with a baton:** for small pieces, set the knife or hatchet on top of the wood and tap its back with a stout stick (the baton) to drive it through. It's controlled and slow; keep your hands clear of the edge.
6. **Saws:** hold the wood firmly on a support, away from the cut line. Start with a few slow pull strokes, use the whole blade, and keep your fingers away from the teeth.
7. **Carrying and sheathing:** sheathe the head before you walk. Carry it at your side, head down and blade facing away from you. To pass it, hold it head down and handle out, and let go only when they say "thank you". Store it sheathed, off the ground.
8. **Sharpening basics:** with a grown-up, use a file or stone, pushing **away** from the edge. Wear gloves on your holding hand, keep the original angle, and do a few smooth strokes on each side. A loose head means stop using it until it's fixed.
9. **Stop when tired.** Most axe injuries happen when people are tired or rushing.

Fire in wind and rain

- Find dry wood inside standing dead branches and the lower dead branches of conifers, and split wet sticks to reach the dry core.
- Use a platform of sticks on wet ground; make extra tinder and **feather sticks**.
- Shield the fire with your body or a windbreak of logs or rocks, never a low tarp over the flames.
- In strong wind, **don't light a fire at all**: sparks start wildfires.

Feather sticks

1. Hold a dry stick firmly with its end on the block.
2. With a sharp knife, shave long, thin curls downward, stopping before the end so they stay attached.
3. Turn the stick and repeat until it looks like a feather. Always cut down and away, sitting or kneeling.

Cooking fires

- Let the fire burn down to **hot coals**; that's where cooking happens, not on tall flames.

- Use a stable pot on rocks or a grill, with handles turned away. Use a pot holder or a thick cloth.
- Keep a clear "kitchen zone" with no running, and keep little ones far back.
- Cook food all the way through (Chapter 6).

Teaching younger kids

- Little ones learn **fire safety only**: stay back, stop-drop-roll, give matches to a grown-up.
- Show from a safe distance, and say the rules aloud ("two big steps back").
- Never hand a younger child a knife, axe, matches or ferro rod.
- Be the example: tools sheathed, fire watched, put out cold.

Ranger checklist

- ☐ (All) I stay back from fire and know stop, drop and roll.
- ☐ (11+) I can show the knife safety circle, cutting away, and closing and passing.
- ☐ (11+) I checked for a fire ban, and picked and cleared a safe site.
- ☐ (11+) I built a teepee and a log-cabin lay with a grown-up.
- ☐ (11+) I lit a fire with matches or a ferro rod, and put it out cold.
- ☐ (14+) I can show the axe safety circle, chopping block, kneeling hatchet stance and baton splitting.
- ☐ (14+) I carved feather sticks and lit a fire in damp conditions with a grown-up.
- ☐ (14+) I helped teach fire safety to younger kids.

Earn your badge (Fire & Tools  )

Level	Who	Requirement (shown to a trained grown-up)
 Heart /  Bronze	Sprouts, Trail Cubes	Fire safety only: say and show "stay back" and stop, drop and roll.
 Silver	Pathfinders (11–13)	Show the knife safety circle, cutting away, closing and passing, and knife care. Check the fire ban, choose a site, build a teepee or log-cabin lay, light it with matches or a ferro rod, and put it out cold.
 Gold	Trail blazers (14–17)	All of Silver, plus axe and saw safety, a chopping block, the kneeling stance, baton splitting, carrying and sheathing, and sharpening with a grown-up. Make feather sticks, light a fire in wind or damp, cook on coals, and teach fire safety to younger kids.
The grown-up must be trained and present for every demonstration. Badges are		

Level	Who	Requirement (shown to a trained grown-up)
never earned alone.		

Watch and learn

- Planned: Fire Is a Grown-Up Job (Rule #2)
- Planned: Walking Staffs Are Tools
- Handbook Chapters 5 (shelter fire), 6 (food), 13 (cuts and burns)
- Adults_18plus/01_Fire_Starting (grown-ups only)

Grown-up note

Teach tools in this order: talk, watch, try with your hands over theirs, then practise alone with you beside them. Check local laws on carrying knives, especially for minors and in public places or camps; many places restrict them. Follow fire bans without exception. Keep a first-aid kit and water at every fire. No fire or tools in or near shelters, ever. Store blades and fire-starters out of young children's reach.

Sources (our own words; checked Oct 21, 2026): Leave No Trace, Minimize Campfire Impacts

<https://Int.org/why/7-principles/minimize-campfire-impacts/> (200) · USDA Forest Service, Fire

<https://www.fs.usda.gov/visit/know-before-you-go/fire> (200) · Smokey Bear, Campfire safety

<https://smokeybear.com/en/prevention-how-tos/campfire-safety> (200) · American Red Cross, Burns

first aid <https://www.redcross.org/take-a-class/resources/learn-first-aid/burns> (200) · American

Red Cross, Home fire safety

<https://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/fire.html> (200) ·

Ready.gov, Home fires <https://www.ready.gov/home-fires> (200).